

Bulletin

MODEL: BENTLEY MARK VI

MODIFICATION.

For Category 1 Action:

- a) Rear Axle Retaining Bolts.
- b) Rear Brakes - Equal wear Linkage.

It has been decided to fit 3/8" diameter bolts as shown on Fig.1, in place of the existing 5/16" diameter bolts (5) which retain the rear axle shaft bearing housing (2) and the brake carrier plate (1) to the axle tube. It has also been decided that opportunity should be taken to reverse the equal wear brake linkage of the rear brakes and fit the stiffened linkage which consists of a new push rod and jaw.

Although some cars will already have the unstiffened linkage reversed and others will have the stiffened linkage, it is desired that all cars should be brought to the full modified standard as soon as possible. The decision to reverse the brake linkage and fit the stiffened type is in order to eliminate the possibility of the rear brakes developing a jamming action (spragging), due to the trailing shoes pivoting about the inter shoes equal wear linkage instead of about the adjuster end of the shoe. A modification has been introduced, moving the point of attachment of the linkage to the trailing shoe nearer the adjuster. This is done by simply reversing the linkage and the central pivot of the linkage, so that the shorter of the two links is now attached to the leading shoe instead of to the trailing shoe as was previously the case. (See Fig.2).

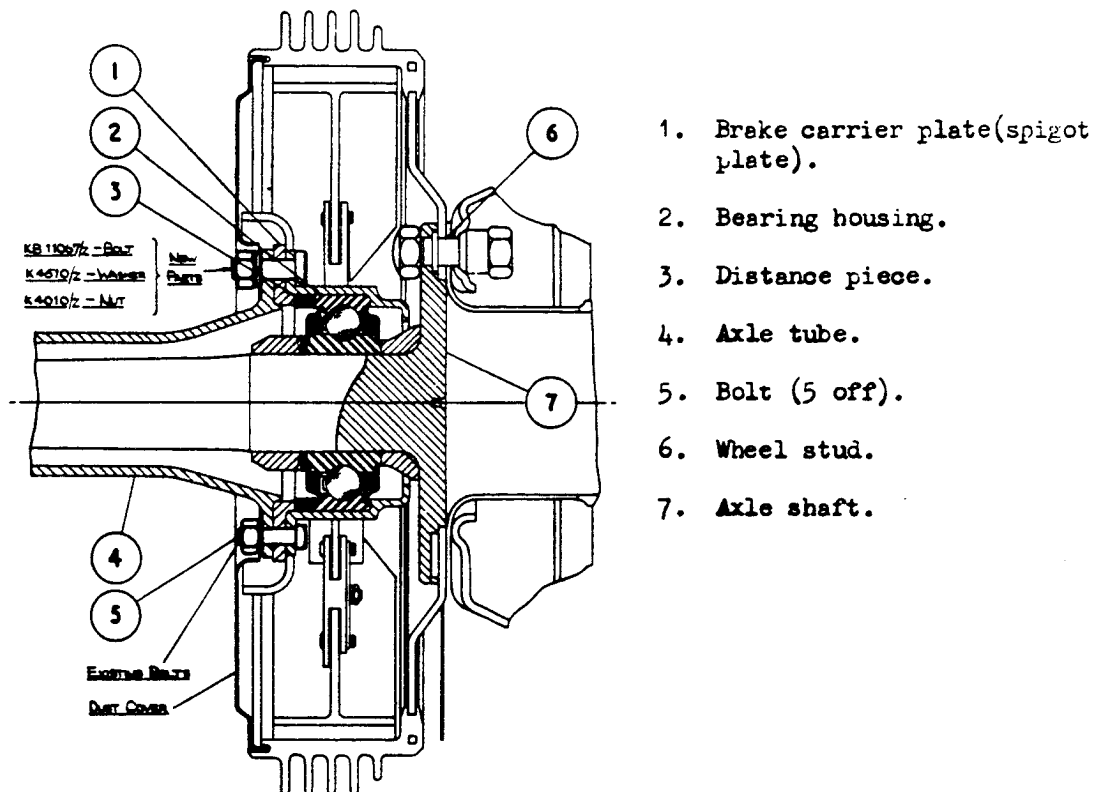


FIG. 1.

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MATERIAL REQUIRED:

<u>Part No.</u>	<u>Description</u>	<u>No. Off</u>
RG.6045	Jaw - Push Rod	2
RG.6046	Push Rod	2
KB.11067/Z	Bolt - Axle shaft to tube	10
K.4510/Z	Grover Washer	10
K.4010/Z	Nut	12 (Two of these nuts will be required for the jaw of each of the two new push rods).
	$\frac{3}{8}$ " dia. three flute twist drill	1 off

1. TO FIT $\frac{3}{8}$ " DIAMETER BOLTS TO THE REAR AXLE SHAFT BEARING HOUSING, THE BRAKE CARRIER PLATE AND THE AXLE TUBE.

- (1) Chock the front wheels of the car and release the hand brake and raise both rear wheels clear of the ground by jacking under the Centre casing of the rear axle. Place a block of wood or trestle under the centre of each of the rear springs, care being taken not to damage the spring gaiters.
- (ii) Remove one rear wheel and then unscrew the three countersunk headed retaining screws from the face of the brake drum and withdraw by hand the wheel hub and then the brake drum.
- (iii) Unscrew the five 5/16" B.S.F. nuts from the bolts (5 Fig.1) lying inside the recess in the dust cover at the rear of the brake carrier plate and gently draw out all the bolts which retain the axle shaft bearing housing (2) and the brake carrier plate (1) to the axle tube (4).
- (iv) Holding the brake carrier plate in position, carefully withdraw the axle shaft assembly by hand until the shaft is clear of the leather oil seal fitted to the centre casing of the axle and then fully withdraw the assembly. Immediately replace four of the five bolts removed to secure the brake carrier plate to the axle tube, line up (centralise) the five holes in the brake carrier plate with those of the axle tube and fully tighten up the nuts of the bolts. Washers will have to be included in order to be able to tighten up the four nuts. Plug up the end of the axle tube with clean rag. Using the three flute twist drill, open up together the uncovered hole in the brake carrier plate and axle tube to $0.375" + 0.005$ and temporarily fit one of the new $\frac{3}{8}$ " diameter bolts, KB.11067/Z to the carrier plate and tube and tighten up the nut.

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Remove each of the remaining 5/16" diameter bolts in turn and follow the same procedure i.e. after opening up a hole, fit one of the new bolts and tighten up. Remove the five new bolts and lightly chamfer the holes on the outer face of the carrier plate and the rear face of the axle tube to remove keen edges. A 3/4" (19 m/m) diameter spherical headed rotary file is recommended for this purpose.

NOTE: The use of a three flute twist drill is quite satisfactory without reaming.

- (v) Plug up the bearing housing (2 Fig.1) of the axle shaft assembly with clean rag so as to prevent the entry of drilling swarf and then open up the holes in the flange of the bearing housing to the same dimension i.e. to 0.375" + 0.005" and lightly chamfer the inner face to remove keen edges. Using a small round file, chamfer the holes on the outer face of the bearing housing to allow for the radius under the heads of the bolts. Blow out with compressed air the brake mechanism and the bearing housing to remove all traces of swarf and then remove the rag plugs from the bearing housing and axle tube.
- (vi) Lightly smear the axle shaft the whole of its length with engine oil but do not add any additional grease to the bearing assembly. With the distance piece (3) in position in the bearing housing, carefully enter the shaft into the axle, at same time feeling for the centre of the oil seal fitted to the centre casing of the rear axle. (The tip of the leather seal points towards the centre of the axle.), then carefully enter the splines of the shaft into the corresponding splines of the bevel wheel and secure with the new bolts, Grover washers and nuts. The nuts must be fully tightened up, using a 3/8" (B.S.F.) box spanner 1 1/2" (38 m/m) long. The distance from the centre of the hole for the tommy bar to the spannering end of the spanner, must be 1 1/4" (31.7 m/m). The end of the spanner to be ground away as necessary so that it clears the recess in the dust cover and fits snugly on the nuts. This information is important as a ring or jaw spanner must not be used for this purpose.

2. TO REVERSE THE EQUAL WEAR LINKAGE OF THE REAR BRAKES AND FIT THE STIFFENED TYPE PUSH ROD AND JAW.

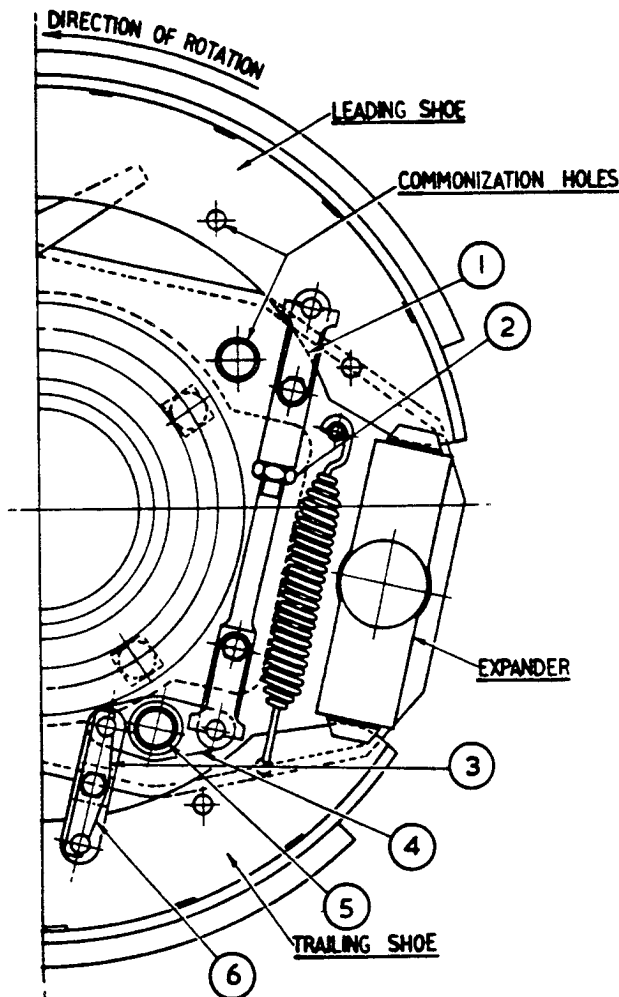
- (i) Carefully draw away the rubber dust cover from the rear brake expander and slide it along the brake rod and then slide the rubber sealing ring along the outer end of the expander. Remove the four 5/16" B.S.F. nuts holding the dust cover to the brake carrier plate and slide the cover along the axle tube out of the way.

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STANDARD



MODIFIED

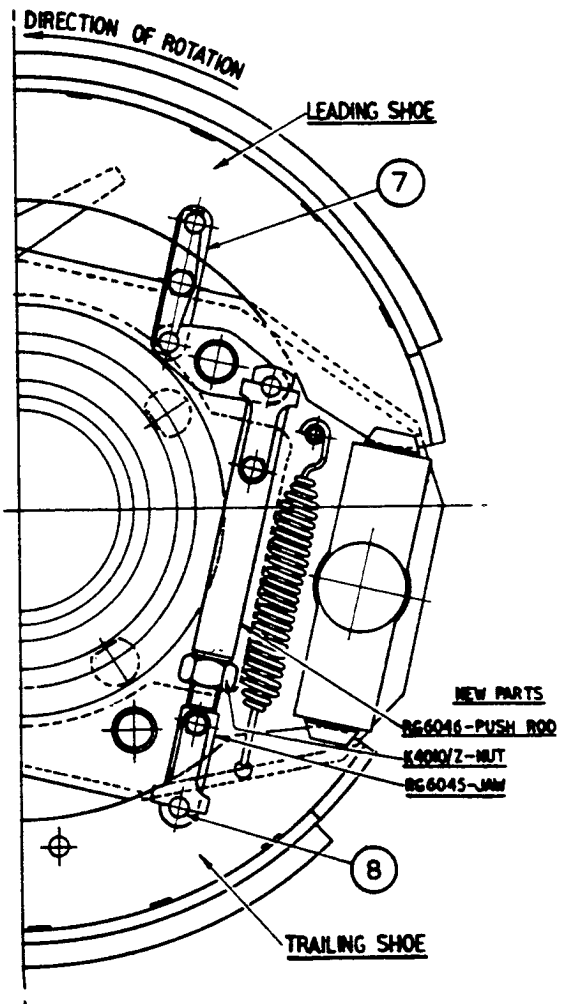


FIG. 2.

- (ii) Unscrew the two setscrews retaining the locking plates (1 & 6 Fig.2) on the inter shoe linkage nearest each shoe and pull out the pins holding the links to the shoes and withdraw the complete linkage away from its pivot (5). Do not disturb the setting of the push rod by turning the jaw relative to the rod. It is advisable before removing the linkage, to check the locknut (2) on the push rod for tightness.
- (iii) With a 7/16" (B.S.F.) cranked ring spanner, remove the locknut, the Grover and plain washer from the back of the pivot (5) and transfer the pivot from its position just above the lower or trailing shoe to the existing hole in a similar position just below the upper or leading shoe. (See "Modified" Drawing Fig.2).

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NOTE: Should it be found that further clearance is required for spanning purposes between the rear dust cover and the locknut at the back of the pivot, unscrew the locknut on the handwheel and then unscrew the handwheel from the adjuster screw and move the dust cover further towards the centre of the axle.

- (iv) Still without disturbing the setting, remove the push rod complete from the pivot lever (4). Place one of the $\frac{3}{8}$ " nuts K.4010/Z on to the new jaw and fit the new push rod and jaw to the pivot lever and adjust the length until it is the same from pin hole to pin hole as the original rod and tighten up the locknut. Since the finest adjustment is half a turn, any error should be such that the new push rod is shorter than the old, rather than longer.
- (v) Refit the linkage complete to the pivot in its new position which will result in the short link (7 Fig.2.) now being attached to the leading shoe and the push rod to the trailing shoe. The necessary holes already exist in the shoe rib, since all shoes are common to any position.

3. TO CHECK THE ADJUSTMENT (CONCENTRICITY) OF THE BRAKE SHOES:

- (i) The reversing of the brake linkage may in some cases result in unequal adjustment between the leading and trailing shoes and prevent proper contact of the liners with the drum. It is therefore recommended that the brake shoes are checked for concentricity in relation to the axis of the axle shaft. To carry out this check, a simple trammel (with sufficient rigidity) with a pointer, adjustable for preference, will be required. The trammel could be attached to two of the road wheel studs on the flange of axle shaft. If upon checking with the trammel, it is found that the adjustment of the shoes needs correcting, then proceed as follows :-
 - a) With a $\frac{3}{8}$ " (B.S.F.) off-set ring spanner, slacken back from three quarters to a full turn, the two hexagon headed setscrews which retain the adjuster unit to the brake carrier plate which will allow the adjuster unit to rotate slightly on its spigot.
 - b) Fit the brake drum, ensure that it is fully home and then fit the three countersunk headed retaining screws to the drum and tighten up. Should any difficulty be experienced in fitting the drum, then slacken back the hand adjustment wheel of the adjuster.

NOTE: Should the handwheel have been removed, then refit it ensuring that it is screwed up fully home and secure it with the locknut.

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- c) Screw up the handwheel by hand as tightly as possible which will lock the drum and centralise the adjuster and then apply the handbrake and tighten up the two hexagon headed setscrews which retain the adjuster unit to the carrier plate. Release the handbrake.
 - d) Slacken back the handwheel until the drum is free and remove the drum.
 - e) Check the shoes with the trammel. If it is found that one of the shoes is nearer to the pointer of the trammel than the other, then it will be necessary to lengthen or shorten the push rod of the inter linkage to equalise the shoes, i.e. if for example, the leading (upper) shoe is closer to the trammel than the trailing (lower) shoe, then it will be necessary to lengthen the push rod half a turn at a time until both shoes are centralised, but if the trailing shoe (lower) is found to be nearer to the trammel, then the rod should be shortened.
- (ii) Inspect that all pins, locking plates of the inter linkage have been fitted and that the three locking plates have been secured with the spring washers and setscrews.
 - (iii) Re-assemble the dust cover and replace in position the rubber sealing ring and the rubber dust cover. Refit the brake drum and wheel hub.
 - (iv) Spin the drum to ensure the brake setting has not been accidentally disturbed, then fit the wheel and disc.
 - (v) Repeat for the opposite side.
 - (vi) Finally check the external adjustment of the brakes.



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MODIFICATION.For Category 1 Action:

- | | | |
|----|----------------------------------|-------------|
| a) | Rear Axle Retaining Bolts. | } Addendum. |
| b) | Rear Brakes - Equal Wear Linkage | |

In addition to carrying out the modifications as detailed in Bentley Service Bulletin No: BB-73 (Section L), it has also been decided to reduce the nip on the outer race of the ball bearing on the axle shaft to zero by reducing the width of the distance (adjusting) piece, (3 Fig.1 of Bulletin BB-73) from 0.002" to 0.003" (0.050 m/m to 0.076 m/m) whatever the width of the distance piece may be found to be.

NOTE: It is essential that each individual distance piece is refitted to the axle shaft assembly from which it was removed.

Fig. 1 (below) is a section through the distance piece fitted to the ball bearing assembly of the axle shafts for chassis series 'AK', 'AJ', 'BH' and 'BG' and Fig. 2 is a cross section through the distance piece fitted to the ball bearing assembly of the axle shafts for series 'CF', 'CD' and onwards.

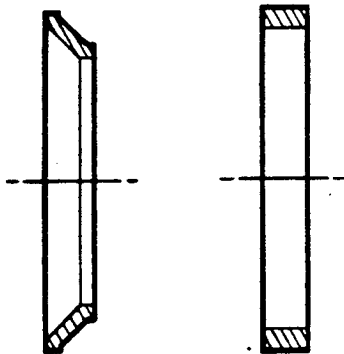


FIG. 1.

FIG. 2.

Procedure:

- (i) After the removal of an axle shaft as described in Bulletin No: BB-73, remove the distance piece from the ball bearing housing which is a free fit.
- (ii) Carefully measure the width of the distance piece and reduce the width by machining 0.002" to 0.003". The distance piece is made of mild steel. In the unlikely event of machining facilities not being available, then it will have to be carefully reduced by hand, keeping the faces parallel.
- (iii) Repeat for the opposite side.

NOTE: The recommended tommy bar length for the box spanner described in sub-paragraph vi on page 3 of Bulletin No: BB-73 is 6" (152 m/m).

NOTE:

- (a) $\frac{3}{8}$ " dia. rear axle retaining bolts are fitted on production to Chassis No: B-273-EW. and all subsequent chassis.
- (b) Reversed and strengthened equal wear linkage is incorporated on production on Chassis No: B-493-DZ and onwards.

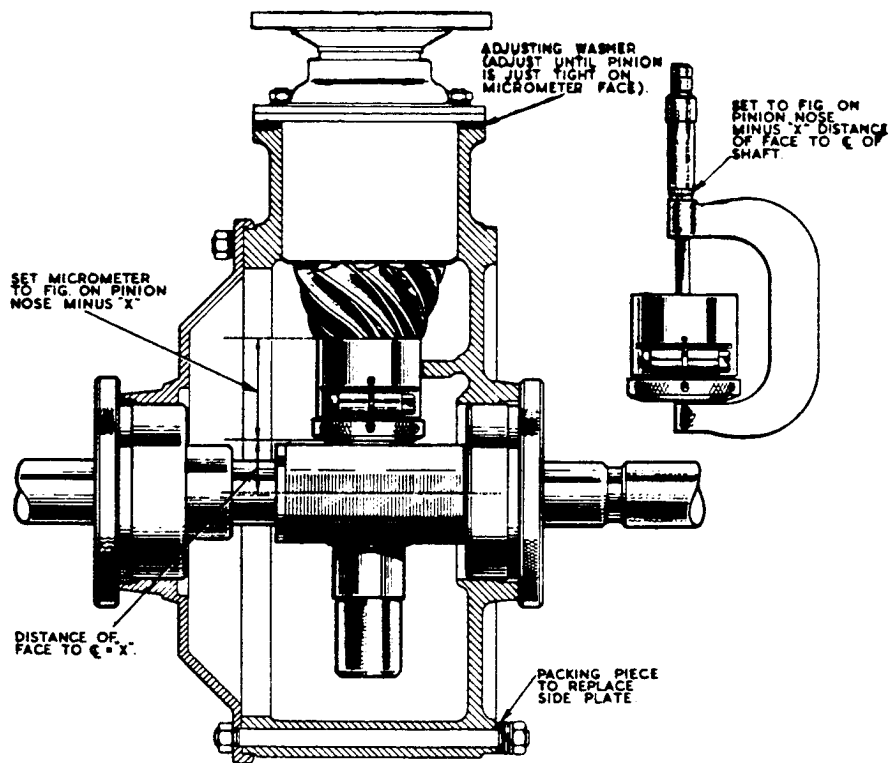
All chassis numbers between B-493-DZ and B-273-EW will therefore require the fitting of $\frac{3}{8}$ " rear axle retaining bolts only.

FOR INFORMATION:INSTRUCTIONS FOR FITTING NEW CROWN WHEEL AND PINIONASSEMBLY TO BENTLEY MARK VI.

For the purpose of this instruction, it is assumed that the Rear Axle is already dismantled, also that the Bevel Pinion has been assembled.

The pinion measurement will be found etched on the radius of the bevel pinion nose. N.B. When taking any measurements in this operation, great care is necessary as the slightest discrepancy will result in noisy gears.

1. Remove bevel pinion nose bearing from housing in the axle casing.
2. Remove off-side thrust bearing.
3. Remove the thrust bearing from the near-side (L.H.) side plate, and refit the side plate to the axle casing, using all the clamping bolts. A distance piece will be required for the clamping bolts, as the (R.H.) side plate is removed.
4. Set up the pinion adjusting tool as shown in the sketch with the two side location pieces fitted into the bearing housings and the centre piece facing the pinion nose.



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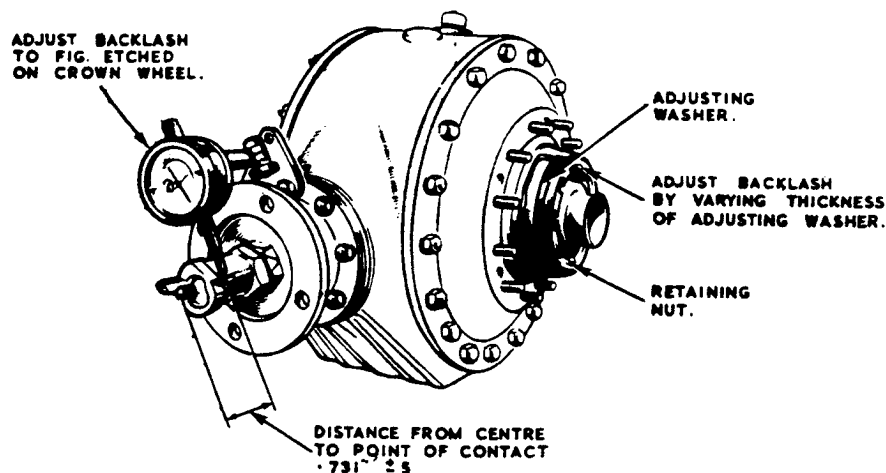
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5. Set the measuring piece as follows:-
Subtract 1.00" (the distance X in the sketch) from the measurement etched on the pinion nose, and set the overall length of the micrometer nose piece to this difference.

NOTE: The figure on the pinion nose will be about 2.900"

6. Place the micrometer nose piece on the pinion nose and refit the bevel pinion to the axle casing. Press the bevel pinion on to the centre bar so that the micrometer nose piece just turns when the pinion is lightly turned by hand. (No excessive pressure is required.)
7. Measure the gap between the bevel pinion housing and the face of the axle case. If it is found that the existing washer is too thick, it can be reduced. If it is too small, a new washer of the correct thickness is required.
8. Having obtained and fitted the correct distance washer, secure the bevel pinion to the centre axle casing, using the nine securing nuts. It may be found, after having tightened the nuts around the bevel pinion, that a slight alteration is necessary to the distance washer.
9. Remove the bevel pinion assembly and the (L.H.) side plate, complete with locating piece.
10. Remove the locating piece in the (R.H.) side of the axle case, and the centre bar and measuring piece.
11. Refit the bevel pinion nose bearing to the axle casing.
12. Insert the bevel pinion assembly in the axle case and tighten the nine nuts with the correct distance washer in position.
13. Refit the roller bearing to the off-side of the axle case.



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14. Refit the off-side side plate, bearing spring and thrust washer, oil seal and housing, and side shaft tube.
15. Refit the differential assembly to the axle centre case.
16. Replace the (L.H.) side plate and roller bearing outer race and tighten the nuts.
17. Insert the bearing adjusting washer to the near-side and tighten the retaining nut securely.
18. Check for correct backlash using Gauge No. 1649/G1001:-
The required backlash will be etched upon the crown wheel, ranging from .006" to .008". The method of obtaining this, is as follows:-

The adaptor nut of the gauge is screwed on to the thread of the bevel pinion flange securing nut. (One or two threads are left exposed after the securing nut has been tightened) A small lever is attached to the screw device and can be altered by adjusting the clamping nut (See Fig. 2.)

Secure an indicator clock to the axle casing so that the registering member strikes the lever at a radius of .731" \pm .005 from the centre of the bevel pinion, (i.e. the registering member should contact the .125" dia. ball) Measure the backlash on the indicator and take twelve different readings by moving the crown wheel to twelve positions. The average of these readings should coincide with that etched upon the crown wheel.

If the backlash reading obtained is too large, then the distance piece behind the thrust bearing in the near-side side plate is too small and needs to be increased. Conversely, if the reading is too small, then distance piece must be reduced.

N.B. It is very important that when carrying out pinion measurements and backlash operations, all nuts must be tight.

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FOR INFORMATION:RECONDITIONING OF REAR AXLE SHAFT ASSEMBLIES.

Hitherto when it has been necessary to renew an axle shaft ball bearing, it has been the practice to replace the complete axle shaft assembly and return the original assembly to the London Service Station for reconditioning. This is because the bearing retaining collar was shrunk on the axle shaft and required elaborate tackle. It has now been decided to press the collar on cold, and providing Retailers have the facilities of a suitable press, they should be able to remove and replace a bearing as described in this Service Bulletin. The load required to press the collar into position is from 6 to 10 tons.

The above cancels the instructions contained in the second paragraph under "NOTE" on page 2 of Sub-Section BL-1 of the Workshop Manual.

BEARING RENEWAL ON 'C' SERIES CHASSIS & ONWARDS:1. TO DISMANTLE:

- (i) With the spigot plate (6 Fig.1) removed from the bearing housing, mount the assembly in a lathe, turn the collar (4) until it is very thin and then split it. This will avoid the turning tool damaging the shaft.
- (ii) Bolt the extractor, 733/T1002 to the flange of the housing and withdraw the bearing and housing from the shaft.

NOTE: If it is found after the removal of the bearing that the journal of the shaft is worn (diameter new 1.7726" - .0003" = 45.023 m/m) due to the inner race of the bearing having revolved on the shaft, a complete new assembly should be fitted and the original one returned to the London Service Station for reconditioning by a special salvage scheme.

If the oil seal (fitted to the rear axle) has worn a small groove on the axle shaft where the leather seal makes contact, this can be improved by lightly blending the groove providing it is not too deep.

2. TO ASSEMBLE:

For parts required, See Para. 3.

- (i) With a micrometer, measure the width of the outer race of the old and new bearing. The variation in outer race width should not exceed .002" = .05 m/m (maker's figure). If the new bearing is wider, a similar amount should be ground off the adjusting piece (2 Fig.1), but if it is narrower or of identical width, the adjusting piece can be refitted without alteration. A .002" end float of the adjusting piece, between the outer race of the bearing and the spigot plate, could arise from this procedure which is permissible.

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- (ii) If for any reason the bearing housing or the spigot plate is to be replaced, then proceed as follows:-
- a) Press the new bearing FULLY HOME into its housing and bolt the housing to the spigot plate with no adjusting piece fitted.
 - b) Place the sub-assembly on a surface plate with the spigot plate uppermost and clock the top face of the spigot plate (See Fig.2). Fit a new adjusting piece (RG-3181), bolt up as before, and again clock the face of the spigot plate. An amount equal to the difference in clock readings should then be ground off the adjusting piece. The aim is to obtain zero nip on the bearing, but a nip NOT EXCEEDING .002" (.05 m/m) is permissible.
- (iii) Next place the distance piece (8) on to the axle shaft followed by the housing complete with bearing and press the bearing fully home. Fit the spring plate (3), making sure it is positioned the correct way round (See Fig.1).
- (iv) Squarely press on the collar (4) until it is also fully home which will automatically flatten out the spring plate. (Do not lubricate bore of collar prior to pressing it on).
- (v) Place the adjusting piece (2) in position and attach the spigot plate (6) to the housing by means of two bolts to keep the adjusting piece and spigot plate to its correct assembly.

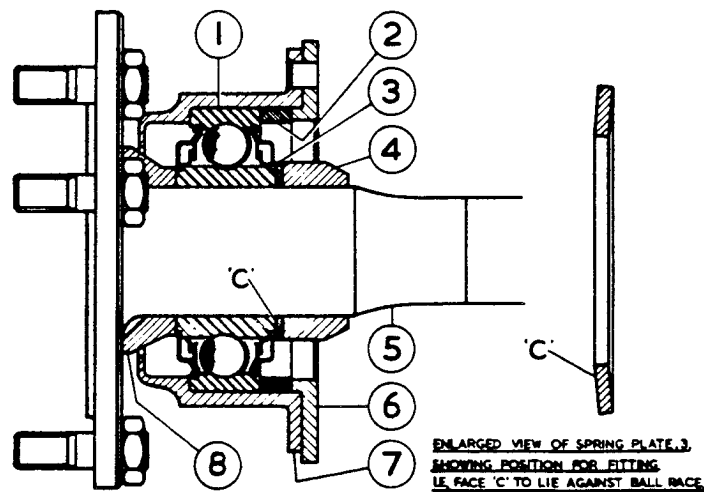


FIG. 1. SECTION - REAR AXLE SHAFT ASSEMBLY.

NOTE: It is suggested that "pressing-on" tackle (not supplied) should be made in accordance with details given on Figs. 3 or 4. The best method of pressing on a bearing and collar is (providing a suitable hollow press is available) to place the sleeve (Fig.3) on the bed of the press with the axle shaft pointing downwards. If a hollow press is not available, then the details as shown on Fig.4 should be made up. The steel tube is of sufficient length to cover a Silver Wraith R.H. side axle shaft assembly, this being the longest.

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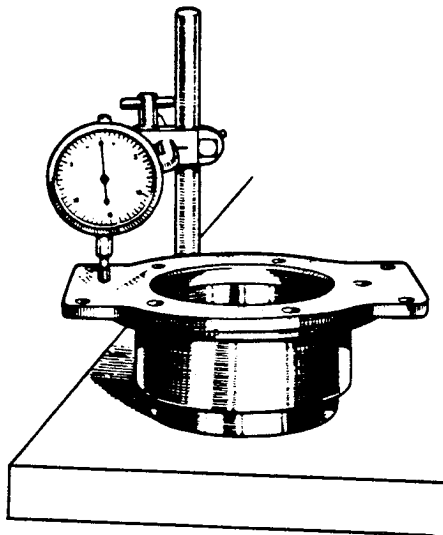


FIG. 2. CLOCKING TOP FACE OF SPIGOT PLATE.

A circular block $4\frac{1}{2}$ " diameter by $1\frac{1}{4}$ " thick (approximately) should be placed beneath the flange of the axle shaft to protect the wheel studs when using the steel tube.

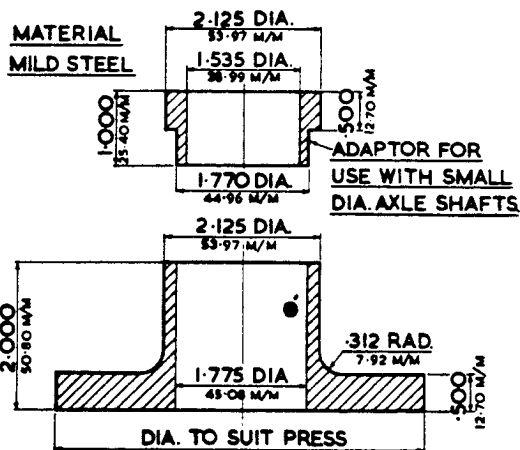
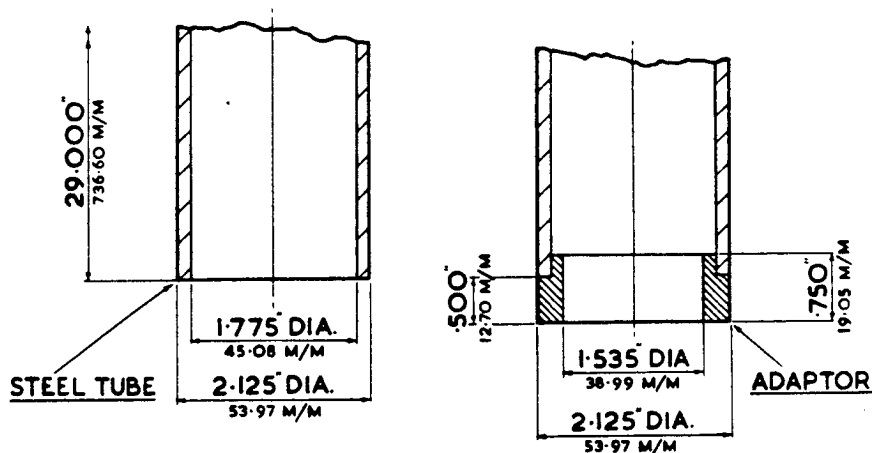


FIG. 3. SLEEVE AND ADAPTOR.



ENDS OF TUBE AND ADAPTOR TO BE SQUARE WITH AXIS.

FIG. 4. STEEL TUBE & ADAPTOR. (ADAPTOR FOR USE WITH SMALL DIAMETER AXLE SHAFTS).

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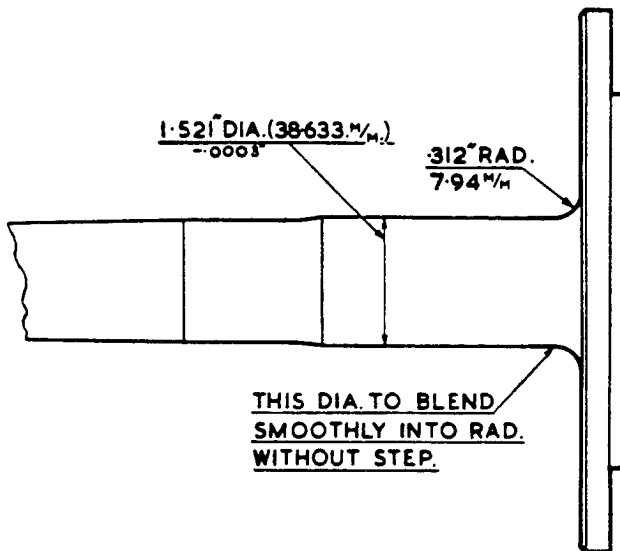
3. PARTS REQUIRED:

Part No.	Title.	No. off per axle shaft assy.	Illustration No.
RG-5365 or RG-6986	Ball Bearing.	1	1 Fig. 1.
GB-4955	Spring Plate.	1	3 " "
GB-4956	Collar.	1	4 " "

NOTE: 'C' and later series assemblies are quite suitable for replacements on 'A' and 'B' series chassis.

4. SPECIAL PROCEDURE TO BE ADOPTED FOR 'A' & 'B' SERIES CHASSIS AXLE SHAFT ASSEMBLIES.

Smaller diameter axle shafts and bearings were fitted to 'A' and 'B' series assemblies although certain cars may have had the axle shaft assemblies of 'C' series type fitted as replacements. The small bearing type can be identified by the external shape of the housing (See 'A' Fig.6).



Unless facilities exist for regrinding the bearing journal of the shaft, there is no point in dismantling the assembly for bearing renewal and if Overseas, it should be discarded in favour of a complete new assembly. Home Retailers should return the old assembly to the London Service Station for modification. Where grinding facilities exist, the bearing should be removed in the usual manner, the shaft re-ground on its journal to the dimension shown on Fig.5, and a special bearing of large track diameter fitted. This will necessitate a 'C' series housing and other details itemised in Para. 5.

FIG. 5. SECTION-REAR AXLE SHAFT SHOWING GRINDING DIMENSION.

After grinding the shaft, proceed to carry out the instructions described in Sub-paras. ii, iii, iv and v of Para. 2.

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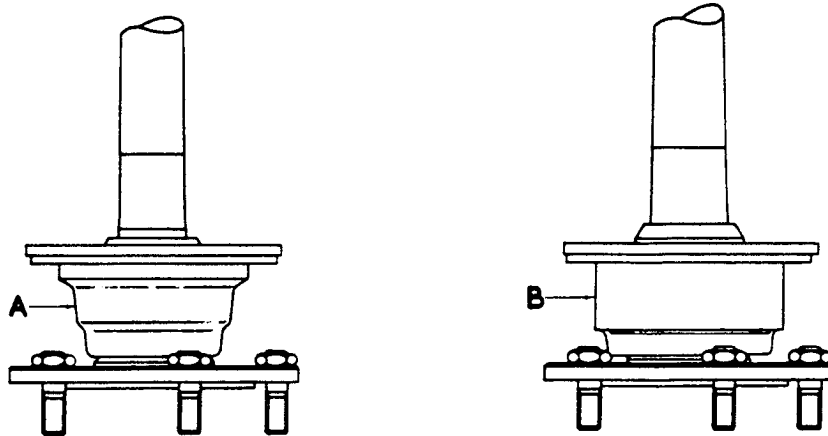


FIG. 6. VIEW SHOWING DIFFERENCE IN EXTERNAL SHAPE OF BEARING HOUSINGS 'A' SMALL BEARING 'B' LARGE BEARING.

5. PARTS REQUIRED: ('A' & 'B' SERIES AXLE SHAFT ASSEMBLIES)

Part No.	Title.	No. off per axle shaft assy.	Illustration No
.x. RG-6981	Ball Bearing.	1	1 Fig. 1.
or			
.x. RG-6974			
RG-7021	Housing - ball bearing.	1	7 " "
RG-6982	Distance piece.	1	8 " "
.x. RG-3373	Spring plate.	1	3 " "
.x. RG-6975	Collar.	1	4 " "
RG-3181	Adjusting piece.	1	2 " "

.x. These parts only required if the assembly has been previously modified.

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FOR INFORMATION:RECONDITIONING OF REAR AXLE SHAFT ASSEMBLIES.ADDENDUM

The following is additional information to that contained in Paragraph 4 of Service Bulletin No. BB-134 (Section L).

- (i) Prior to grinding the journal, mount the axle shaft between the centres of a lathe, and with a dial indicator (clock), check the shaft for true running at approximately the centre of it. If the shaft is found to be bowed more than .002" (.05 m/m), it should be straightened (cold) under a suitable press. The required load to straighten will be about 4 tons (4064 Kilos).
- (ii) Depending upon the type of grinding equipment available, it may be found necessary to remove the five wheel studs before the journal of the shaft can be ground in which case, the following new parts will be required.

Right-Hand Side Axle Shaft:

<u>Part No.</u>	<u>Title.</u>	<u>No. Off.</u>	
GB-3832	Wheel stud.	5	The threaded portion of these studs on to which the wheel retaining nuts are fitted, have a RIGHT-HAND thread.
K-4322/Z	Nut.	5	

Left-Hand Side Axle Shaft:

<u>Part No.</u>	<u>Title.</u>	<u>No. Off.</u>	
GB-4468	Wheel stud.	5	The threaded portion of these studs on to which the wheel retaining nuts are fitted, have a LEFT-HAND thread.
K-4322/Z	Nut.	5	

NOTE: A right-hand side axle shaft is 3.950" (100.3 m/m) longer than a left-hand side axle shaft.

- (iii) If the journal of the shaft can be ground with the studs in position, the studs should however be checked (in position) for correct alignment. A bent stud should be replaced. After fitting a new stud and FULLY tightening up the nut, the latter must be locked to the stud by centre punching the metal in four convenient positions.

NOTE: It has now been decided that the bore of the ball bearing and the collar should be lubricated with a straight S.A.E.30 engine oil prior to pressing them on to the axle shaft.

After pressing on the collar, apply a final load of 15 tons (15240 Kilos) to ensure that the distance piece, bearing, spring plate and the collar are in firm contact with one another.

Bulletin

MODEL: BENTLEY MARK VI

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DATA.

New

'A' & 'B' SERIES CHASSIS AXLE SHAFT ASSEMBLIES:

Ins. m/m.

a) Axle shaft bearing bore diameter.	$\frac{1.5196}{1.5201}$	$\frac{=38.597}{38.610}$
b) Axle shaft diameter at bearing journal.	$\frac{1.5207}{1.521}$	$\frac{=38.626}{38.633}$
Interference fit between axle shaft bearing & shaft.	$\frac{.0006}{.0014}$	$= \frac{.016}{.035}$
c) Diameter of bore of axle shaft collar.	$\frac{1.5167}{1.5177}$	$\frac{=38.523}{38.549}$
Interference fit between collar & axle shaft.	$\frac{.003}{.0043}$	$= \frac{.077}{.109}$

'C' SERIES CHASSIS AXLE SHAFT ASSEMBLIES:

a) Axle shaft bearing bore diameter.	$\frac{1.7712}{1.7717}$	$\frac{=44.998}{45.011}$
b) Axle shaft diameter at bearing journal.	$\frac{1.7723}{1.7726}$	$\frac{=45.017}{45.023}$
Interference fit between axle shaft bearing & shaft.	$\frac{.0006}{.0014}$	$= \frac{.016}{.035}$
c) Diameter of bore of axle shaft collar.	$\frac{1.768}{1.7685}$	$\frac{=44.906}{44.919}$
Interference fit between collar and axle shaft.	$\frac{.0038}{.0046}$	$= \frac{.098}{.117}$